

Application. No. 09/687,897

REMARKS

This is in response to the Office Action of 15 June 2004. Claims 1-10 are pending in the application; Claims 1, 4, and 5 have been rejected, Claim 10 has been objected to, and Claims 2-3 and 6-9 have been allowed.

By this amendment, Claims 1 and 4-10 have been amended; and new Claims 11-12 have been added.

No new matter has been added.

In view of the amendments above and remarks below, Applicants respectfully request reconsideration and further examination.

About The Invention

The present invention relates generally to electronic circuits, and more particularly relates to structures and methods for selecting one signal, such as a clock signal, from a number of other signals. Various embodiments of the present invention are advantageously constructed and operated such that entry into any of several undesired states are now recoverable events.

For example, in the circumstance that the rising edge of a selection signal is missed, leading to a state in which all the enable (i.e., validation) signals are inactive, this state is detected and responsive thereto all the latches that are connected to the select signals are clocked (i.e., the attribution process). In this way, an early detection of a missed selection signal is determined, and the present invention responds by clocking all the latches so as to effectively re-sample the state of the select signals.

Allowed Claims

Claims 2-3, and 6-9 have been allowed.

Non-Narrowing Amendments to Claims 6-9

Claims 6-9 have been amended to delete the hyphen before each subparagraph. Dependent Claims 7-9 have been amended in their preambles to replace the word "A"

Application. No. 09/687,897

with the word "The". Applicant respectfully submits that these non-narrowing amendments improve the readability of the Claims without affecting the scope thereof.

Objection to the Claims

The Examiner has objected to the Claims because of certain informalities and has required correction. More particularly, the Examiner indicates that it is not clear that the dependencies of Claims 4, 5, and 10 are actually in the preamble. Appropriate correction has been required. The Examiner has also objected to the grammar of the language "claimed in one of the claim 1", in Claim 5.

By this amendment, Claims 4-5 and 10 have been amended to correct the informalities cited by the Examiner. In particular, the recitations of Claim dependencies have been rewritten so that they to conform to more common Claim drafting practices. These amendments make clear that Claim 4 is a dependent Claim that depends from Claim 1; Claim 5 is a dependent Claim that depends from Claim 4; and Claim 10 is a dependent Claim that depends from Claim 6. Applicants respectfully submit that the correction of these informalities have overcome the objections to Claims 4-5 and 10.

With respect to the grammatical objection to Claim 5, Applicant respectfully directs the Examiner's attention to the Preliminary Amendment filed concurrently with the application, in which the language objected to was deleted. Applicant respectfully submits that this objection to Claim 5 should be withdrawn.

Rejections under 35 USC 112, second paragraph

Claim 4 has been rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner indicates that it is not clear what reset step Applicant is referring to because Claim 1 does not recite a reset step.

Claim 4 has been amended to recite the reset step which was previously referred to therein, but which was not recited in the base Claim. Applicant respectfully submits

Application. No. 09/687,897

that this amendment overcomes the rejection under 35 USC 112, second paragraph.

Rejections under 35 USC 102(b)

Claims 1 and 4 have been rejected under 35 USC 102(b) as being anticipated by Rangan, et al., (US Patent 5,903,616).

Rangan, et al., disclose clock selection circuitry in which the assertion of a clock enable signal results in all other clock selection circuits being de-selected. In other words, once a select signal is clocked into a latch, the output of which enables the output of an associated clock signal, that latch output is provided as an input signal to all the other clock select circuits to disable their clock output circuits. In this way, only one of the clock selection circuits will provide a clock signal.

Applicant respectfully submits, that the disclosure of Rangan, et al., does not teach, suggest, or provide motivation for Applicant's claimed invention. More particularly, Claim 1 is directed to an invention in which a detector circuit recognizes a condition in which all of the enable (i.e., validation) signals are in an inactive state (i.e., none of the clock signals are enabled to be provided as an output), and responsive to the detection of this condition, all the latches, Li, to which the select signals are connected as data inputs, are re-clocked. In this way, the time period in which no clock signal is provided is reduced.

Additionally, independent Claim 1 has been amended, consistent with the specification, to make clear that the attribution step is carried out responsive to all the validation signals being in an inactive state. The circuitry taught by Rangan, et al., does not provide this functionality. It can be seen that the circuitry of Rangan, et al., does not provide any means for detecting all the validation signals being in an inactive state; and does not provide any electrical pathway by which the latches to which the select signals are coupled, can be re-clocked responsive to such a detection.

Claim 4 depends from amended Claim 1, and as noted above, has itself been amended to recite a resetting step.

In view of these remarks and amendments, Applicant respectfully submits that

Application. No. 09/687,897

the rejections under 35 USC 102(b) have been overcome.

Rejections under 35 USC 103(a)

Claim 5 has been rejected under 35 USC 103(a) as being unpatentable by Rangan, et al., (US Patent 5,903,616) in view of Sengoku (US Patent 5,875,321).

Claim 5 has been amended to depend from amended Claim 4. Amended Claim 4 recites the limitations of allowed Claim 3. In view of the foregoing, Applicant respectfully submits that the rejection under 35 USC 103(a) has been overcome.

New Claims 11-12

New Claims 11-12 depend indirectly from allowed Claim 6. These new dependent Claims are directed to implementation aspects of the detection means for detecting that all the validation signals are simultaneously inactive, and of the detection means for detecting fronts of the validation signals, respectively. More particularly, these Claims recite that their respective means comprise a delay cell. Support for these Claims can be found at pages 8-9, and in Figs. 3-4.

Conclusion

All of the objections and rejections in the outstanding Office Action of 15 June 2004 have been responded to, and Applicants respectfully submit that the pending Claims 1-12 are now in condition for allowance.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

By Raymond J. Werner
Raymond J. Werner
Reg. No. 34,752

Dated: 31 August 2004
Hillsboro, Oregon